

apex (nuclear whorls) are a pale straw color and somewhat glass-like in appearance. Proportionately, the shell is more attenuated and the whorls somewhat less convex. All remaining characters appear as in the typical form.

Length 19.1, width 9.9, aperture 9×5.1 mm. (holotype). Length 20, width 11, aperture 9.4×5.9 mm. (average of five paratypes).

Holotype.—Univ. of Alabama, no. 89, 2 miles North of West Greene, Greene Co., Alabama. Paratypes, Mus. Comp. Zoöl. No. 75036 from the same locality. Miss Winnie McGlamery collector, 1933.

This variety does not appear to be an ecological form. Though a member of the species assemblage found in the "chalk" area, it differs quite sharply from most of the lots studied from these regions. It is possibly a small geographical race. West central Alabama is still imperfectly known and the adjoining territory in Mississippi remains to be investigated.

THREE NEW SPECIES OF CERIONS FROM LONG ISLAND, BAHAMAS

BY WILLIAM J. CLENCH

During the past July and August (1936) a third expedition was made to the Bahama Islands to continue the molluscan survey initiated in 1935. To date, Grand Bahama, the Abaco group, Eleuthera, New Providence, Cat and Long Islands have been covered sufficiently to render individual reports. The present expedition, undertaken by H. D. Russell, R. A. McLean, J. H. Huntington and R. W. Foster was made to Long Island. Two very remarkable Cerions were found, quite different from any species heretofore discovered in these islands, and in addition, a large series of *C. stevensoni* Dall was collected, the locality of which had been previously open to question. Mr. J. V. Malone, Commissioner of Long Island, has just submitted a third new species, of considerable interest as it is a connecting form between *C. malonei* (new) and members of the *regina* group of Cerions to which both of these forms belong.

CERION (STROPHIOPS) 'MALONEI, new species. Plate 3, fig. 6.

Description.—Shell cylindrical, rather short, smooth to ribbed, solid and widely and deeply umbilicated. Color: flat white, with no indication of mottling. Whorls: 9 to 10, the last three more or less parallel sided, the remaining whorls narrowing rapidly to form a short slightly convex spire. Spire produced at an angle of 90° – 100° . Aperture sub-ovate to sub-quadrate, generally with a fairly straight margin along the parietal wall, the peristome occasionally pinched so that the aperture becomes holostomatous. Columella inclined slightly, supporting a small inconspicuous tooth which is sometimes reduced to a minute, irregular lump. Parietal wall with a large tooth that does not penetrate any distance within the aperture. Lip expanded, thin and not turned backwards. Umbilical perforation wide and very deep—a probe reaching as far back as the nuclear whorls. Suture barely indicated, sometimes the last whorl is offset and smaller than the mid-whorl, leaving a small ledge or overhang. Occasionally there is an upturn to the body whorl just before the aperture, so much so that the superior margin of the aperture is close to or even with the whorl above. Sculpture: smooth to somewhat coarsely ribbed, with about 18 to 23 ribs on the body whorl, an unusual character is that the ribs are most strongly developed on the penultimate whorl. Nuclear whorls always smooth. Length 31.5; width 18.6; aperture 9×6 mm. (holotype). Length 25.6; width 16.6; aperture 7.6×5.7 mm. (average of 7 specimens).

Holotype.—Mus. Comp. Zool. No. 112706, $3\frac{1}{2}$ mi. SE. of Simms, Long Id., Bahamas. Russell, McLean, Huntington, Foster, collectors, July, 1936. A large series of paratypes obtained from the same locality.

Remarks.—This species forms a striking parallelism with *C. dimidiatum* Pfr. of Gibara, Cuba, particularly to the short and squat form known as *proteus* Pfr. Superficially the resemblance is exceedingly close, but the apertural characters exhibited by *C. malonei* show a direct relationship to the *regina* group of the lower Bahama Islands. It would appear rather that *C. malonei* is an extreme divergent form of this group, connected to the main stock through a more or less intermediate form, *C. fernandina* herein described. Form parallelisms are very abundant in Cerions, the less pronounced characters, such as the structure of the aperture, columellar and parietal teeth, and particularly the lip seem to be far more stable and indicate relationships in accord with the geographical distribution of the individual elements.

The group of *regina*, however, is probably directly related to the group of *maritimum* in which *dimidiatum* is a species. Most of the species of this latter assemblage are found on the north coast of Cuba.

CERION (STROPHIOPS) FERNANDINA, new species. Plate 3, fig. 5.

Description.—Shell large, perforate, solid, subconical to subcylindrical, shining and nearly smooth. Color a flat white, nuclear whorls glass-like and opaque. Interior of aperture a very pale brownish yellow to cream. Whorls 10–11, nearly flat sided, first 7 to 9 forming the slightly convex cone of the spire. Occasionally the whorls, particularly the body whorls, may be slightly inset, forming a slight overhang with the whorl above. Body whorl usually the largest in diameter. Umbilical perforation generally large, located deeply in the broad excavated area behind the columellar lip. The excavated area is abruptly formed by the infolding of the base of the body whorl and in many specimens is wider below the edge. Parietal tooth short, centered and rather high but not penetrating very deeply within the aperture. Columellar “teeth” composed of, usually two, very slight, irregular, flattened and rather inconspicuous knobs, occasionally the upper one large enough to be called a tooth or lamella. Aperture subovate with only a slightly thickened, expanded lip which is usually flat though occasionally slightly folded back. Parietal wall calloused with a thickened ridge connecting the lip extremities; it is, however, not built forward. Sculpture of coarse and irregular growth lines somewhat evenly disposed over the entire shell other than the nuclear whorls. These growth lines on certain species are somewhat grouped forming a few ribs on the body whorl. Sutures only very slightly indented. The spire is produced at an angle of approximately 60° . Length 34.3; width 16.5; aperture 9.2×5.8 mm. (holotype). Length 32; width 16.2; aperture 8.2×5.3 mm. (average of 8 specimens).

Holotype.—Mus. Comp. Zoöl. No. 65131, Millers, 8 mi. SE. of Simms, Long Island, Bahama Islands. J. V. Malone collector, Oct., 1936. (The name *Fernandina* was originally applied to Long Island by Columbus.)

Remarks.—Though the general outline of this form appears to be quite different from *C. malonei*, they are apparently rather closely connected. *C. malonei* is in reality a widely divergent form and represents an extreme in the morphological development of the shell. Both of these forms possess an open umbilical

orifice and similar lip and tooth characters. The present form exhibits but little variation in shape in comparison with *C. malonei*, which from form modification is one of the most variable in the genus.

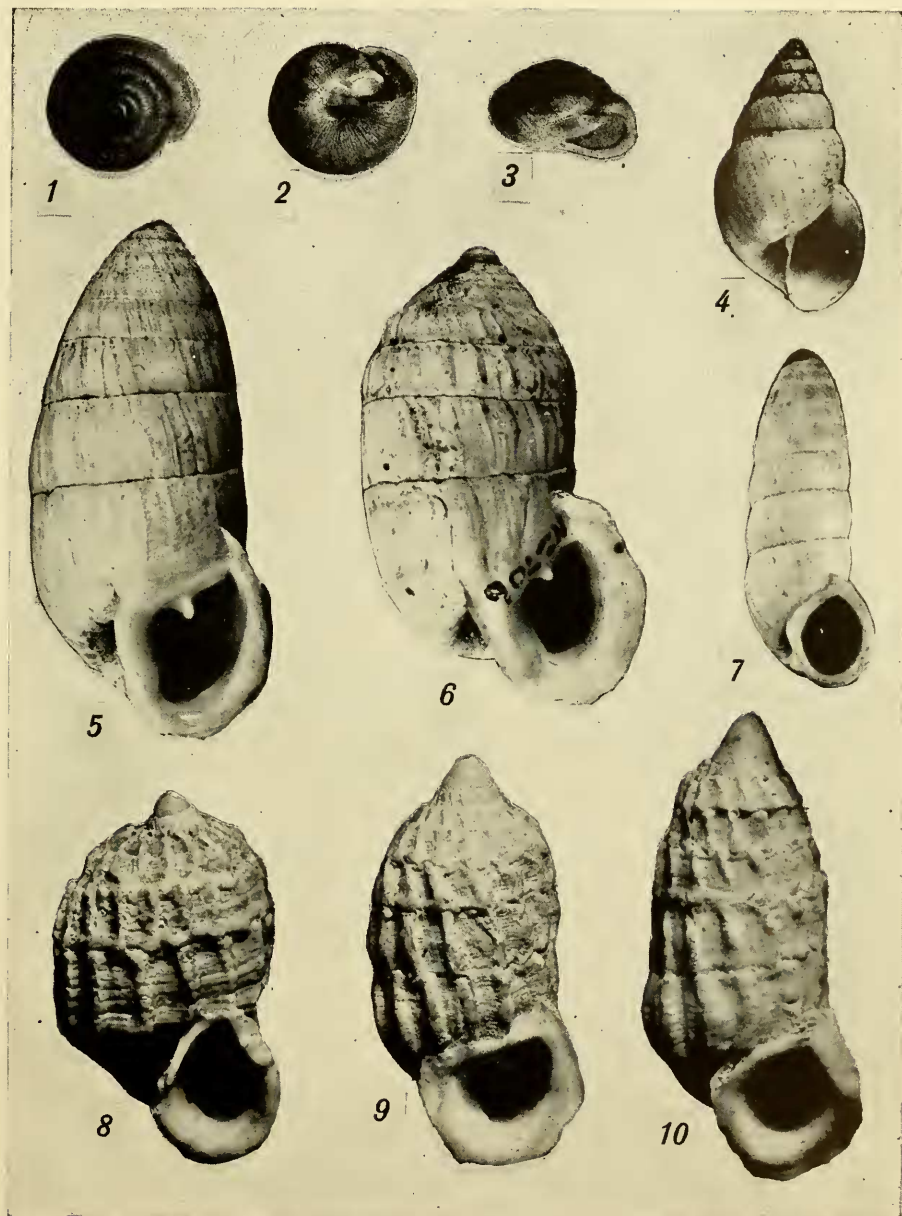
C. fernandina is a member of the *regina* group of Cerions and is patterned quite closely after *C. regium* of Castle Island on the Crooked Island Bank. It is a smaller species, however, and does not possess the rather sharply tapering cone of this latter form.

CERION (STROPHIOPS) MCLEANI, new species. Plate 3, fig. 7.

Description.—Shell narrow, rather coarsely ribbed, cylindrical, small, solid and generally minutely perforate. Color a flat white. Whorls $9\frac{1}{2}$ to 10, slightly convex, and gradually tapering above the fourth whorl to the summit. Spire slightly convex, produced at an angle from 46° to 56° . Aperture subquadrate, holostromatous in fully adult shells owing to the produced parietal ridge. Parietal tooth strongly developed but not extending a great distance within. Columellar tooth obsolete or indicated by a very slight and somewhat broad, thickened area. The interior of the aperture colored a pale brown. Umbilical perforation small, with no definite ridge around the base. Lip flaring, slightly thickened and only very slightly turned back, connected along the parietal wall by a well elevated ridge. Sculpture of rather coarse ribs, most strongly developed on the body whorl, varying from 12 to 16, with many irregular growth lines both between and on the ribs. No spiral sculpture indicated. Suture fine, not impressed but indicated by the contour of the whorls. Nuclear whorls glass-like, opaque and smooth. Length 21; width 8; aperture 4.5×3.5 mm. (holotype). Length 19.8; width 7.6; aperture 4×3 mm. (average of 4 specimens).

Holotype.—Mus. Comp. Zoöl. No. 112701, one mile East of O'Neills, Long Island, Bahama Islands. Russell, McLean, Huntington and Foster collectors, July, 1936.

Remarks.—A remarkably well differentiated species, totally different from any hitherto obtained in the Bahamas. As with *malonei*, it represents a sharply divergent line of evolution from the normal type of the group assemblage in which it is included. It is a member of the *gubernatorium* group as outlined by Pilsbry (Man. of Conch. (2), 14, p. 240, 1902) and perhaps nearest to *C. eleutherae* P. & V. of southern Eleuthera Island.



1-3, *Polygyra herberti* Walker. 4, *Bulimulus dealbatus jonesi* Cl. 5, *Cerion fernandiana* Cl. 6, *C. malonei* Cl. 7, *C. mcleani* Cl. 8-10, *C. stervensoni* Dall. Figs. 1-7, 9, holotypes.